

SFB 608

Einladung zum Kolloquium

- Ort:** Universität zu Köln
II. Physikalisches Institut, Seminarraum 201
- Zeit:** Mittwoch, 23.02.05, 14 Uhr c.t.
- Sprecher:** Prof. Sergey Borisenko
IfW Dresden
- Thema:** Angle-Resolved Photoemission Spectroscopy of High- T_c Superconductors: Spin Fluctuations or Phonons?

The search for the pairing mechanism in High-Temperature Superconducting (HTSC) cuprates has converged to the choice between the spin-fluctuations and phonons. This dilemma remains one of the main problems of the modern condensed matter physics. We use Angle-Resolved Photoemission Spectroscopy (ARPES) to study the effects of the electron-boson coupling in HTSC. High tunability of the excitation conditions, offered today by the synchrotron radiation facilities, together with the unique performance of our high-resolution ARPES station allowed us to disentangle truly many-body effects from the mere features of the band-structure. We have investigated the behaviour of the spectral function extracted from the experimental data as a function of energy, momentum, doping, temperature and parity with respect to the layers exchange within the bilayer. On the basis of the obtained results for different cuprates we make an attempt to identify the pairing boson in High- T_c superconductors.

Gez. Prof. H. Tjeng